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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,645	02/19/2004	Vanadis Mack Crawford	RSW920040012US1	4115
25259	7590	12/10/2008		
IBM CORPORATION 3039 CORNWALLIS RD. DEPT. T81 / B503, PO BOX 12195 RESEARCH TRIANGLE PARK, NC 27709			EXAMINER MILLER, ALAN S	
			ART UNIT 3624	PAPER NUMBER
			NOTIFICATION DATE 12/10/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

RSWIPLAW@us.ibm.com

### Office Action Summary

**Application No.**

10/782,645

**Applicant(s)**

CRAWFORD ET AL.

**Examiner**

ALAN MILLER

**Art Unit**

3624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 9-16 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/CDC)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

1. This action is in response to the application filed 2/19/2004.  
Claims 9 - 16 are pending and have been examined, claims 1- 8 have been cancelled.  
This action is Non-Final

***Response to Arguments***

2. Applicant's arguments with respect to claims 9-16 have been considered but are moot in view of the new ground(s) of rejection.

***Request for Information***

3. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

Examiner has reviewed the claims and would like to know where, specifically, the mathematical equation presented in claims 13 and 16 came from. Specifically, Examiner requests that the Applicant provide references to textbook(s), publication(s), etc. where the equation of claims 13 and 16 can be found. If the equations are derived from existing equations, Examiner would like to know where the existing equations can be found.

The fee and certification requirements of 37 CFR 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 CFR 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first

communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 CFR 1.105 are subject to the fee and certification requirements of 37 CFR 1.97.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9 and 13 disclose a program storage device, and then disclose method steps. For purposes of examination, Examiner is interpreting claim 9 as a Beauregard claim. A proper way to claim a Beauregard claim would be “a computer-readable medium claim, tangibly embodying a program of instructions executable by the machine to perform method steps for determining numerical scores suitable for use in ranking software product requirements”. Clarification and correction is requested.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinra et al. (U.S 5,731,991, hereinafter Kinra).

8. In respect to Claim 9, Kinra discloses:

evaluating supplier metrics for customer interest categories to provide numerical values for a software product requirement (see at least FIG. 2, 122 and 111, wherein Kinra discloses evaluating categories (*i.e. supplier metrics*) (e.g. 124 and 112) for criterion (*i.e. customer interest categories*) (e.g. 126a – 126d and 112, 114a-114c) to provide numerical values (e.g. 130 and 118));

computing partial scores for the customer interest categories by weighting and summing the numerical values; and (see at least column 4, lines 33-68, wherein Kinra discloses weighing each criterion and summing the values to produce a raw criterion score);

determining an overall score for the software product requirement from the partial scores(see at least column 9, lines 6-13, wherein Kinra discloses determining a total score for each product (*i.e. software product requirement*) ; FIG. 2 158a).

Kinra does not explicitly disclose the labels “supplier metrics” and “customer interest categories”, however, these labels do not functionally affect the steps of evaluating to provide numerical values, computing partial scores or determining an over all score.

9. In respect to claim 10, Kinra discloses exemplary criterion (*i.e. customer interest categories*) that include ease of use (*i.e. usability*), application interoperability (*i.e. interoperability*), automated testing, and application partitioning (*i.e. capability*), application

specifications, physical data definition, prototyping and simulation, and normalized category score (see at least column 4, lines 1-4 and FIG 2, 112).

Kinra does not explicitly disclose performance, reliability, maintainability, documentation, and serviceability.

Examiner takes Official Notice that these categories are old and well known.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include in the criteria of Kinra the old and well known criterion capability, performance, reliability, maintainability, documentation, and serviceability since the claimed invention is merely a combination of old elements, and one of ordinary skill in the art would have recognized that it would produce a predictable result of using any criteria to evaluate categories and are important to a particular user (see column 2, lines 18-22), including usability, performance and reliability, and since the labels of the categories do not functionally affect the computing of scores.

10. In respect to claim 11, Kinra discloses evaluation categories (*i.e. supplier metrics*) integration, construction, reuse, business issues, development, operations, architecture, design, analysis, planning, etc (FIG. 2, 60, 62, 64, 66, 68, column 7, lines 30-47).

Kinra does not explicitly disclose market penetration, priority as determined by a customer, revenue potential, and state of technology advancement.

Examiner takes Official Notice that these categories are old and well known.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include in the categories of Kinra the old and well known categories market

penetration, priority as determined by a customer, revenue potential, and state of technology advancement since the claimed invention is merely a combination of old elements, and one of ordinary skill in the art would have recognized that it would produce a predictable result of using any categories that are to be evaluated and are important to a particular user (see column 2, lines 18-22, column 7, lines 44-47), including business issues and market penetration, and since the labels of the categories do not functionally affect the computing of scores.

11. In respect to claim 12, Kinra discloses wherein the step of determining includes a step of averaging non-zero partial scores (see at least column 4, lines 40-68, wherein Kinra discloses a normalized score calculated by dividing the raw score by the sum of the associated criterion weighting values (*i.e. averaging non-zero partial scores*)).

12. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinra et al. (U.S 5,731,991, hereinafter Kinra) in view of Wolfram MathWorld (<http://mathworld.wolfram.com>, <http://mathworld.wolfram.com/MatrixTrace.html> and <http://mathworld.wolfram.com/Matrix.html>), copyright 1999-2008, hereinafter Wolfram MathWorld).

13. In respect to Claim 13, Kinra discloses forming a vector of numerical values of categories of evaluation (*i.e. supplier metrics*) for evaluation criterion (*i.e. customer interest categories*) for a product (*i.e. software product requirement*), and further discloses forming a vector of weights for each criteria in each category (see at least FIG.2 122 and 111), determining partial scores by

weighting and summing the scores for each criteria in each category (see at least column 4, lines 33-68) and further discloses a and determining an overall score for each product (see at least FIG. 2 156).

Kinra does not explicitly disclose the technique of forming an  $N$  by  $M$  matrix  $A$ , multiplying by an  $M$  by  $N$  matrix  $W$ , or determining the overall score from the diagonal elements of  $P$ .

Wolfram MathWorld discloses that matrix creation, the multiplication of two matrices and the trace of a square product matrix (i.e. *determining the overall score from the diagonal elements of  $P$* ) are old and well known.

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the technique of calculating the scores in Kinra with the old and well known equivalent technique of creating matrices and the multiplication of two matrices and the trace of a square product matrix since claims are combinations that merely unite old elements with no change in their respective functions, and which yield predictable results of arriving at the same results, since neither applicant's specification nor his arguments present any evidence that modifications necessary to effect combinations are uniquely challenging or difficult for person of ordinary skill in art, and since claimed improvement is no more than simple substitution of one known element for another, or mere application of known technique to piece of prior art ready for improvement (*Ex parte Smith*, 83 USPQ2d 1509 (Bd. Pat. App. & Int. 2007)). Further, it has been held that express suggestion to substitute one equivalent technique for another need not be present to render such substitution obvious (*In re Fout*, 213 USPQ 532 (CCPA 1982), *In re Siebentritt*, 152 USPQ 618 (CCPA 1967)).



14. In respect to claim 14, Kinra discloses exemplary criterion (*i.e. customer interest categories*) that include ease of use (*i.e. usability*), application interoperability (*i.e. interoperability*), automated testing, and application partitioning (*i.e. capability*), application specifications, physical data definition, prototyping and simulation, and normalized category score (see at least column 4, lines 1-4 and FIG 2, 112).

Kinra does not explicitly disclose performance, reliability, maintainability, documentation, and serviceability.

Examiner takes Official Notice that these categories are old and well known.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include in the criteria of Kinra the old and well known criterion capability, performance, reliability, maintainability, documentation, and serviceability since the claimed invention is merely a combination of old elements, and one of ordinary skill in the art would have recognized that it would produce a predictable result of using any criteria to evaluate categories and are important to a particular user (see column 2, lines 18-22), including usability, performance and reliability, and since the labels of the categories do not functionally affect the computing of scores.

15. In respect to claim 15, Kinra discloses evaluation categories (*i.e. supplier metrics*) integration, construction, reuse, business issues, development, operations, architecture, design, analysis, planning, etc (FIG. 2, 60, 62, 64, 66, 68, column 7, lines 30-47).

Kinra does not explicitly disclose market penetration, priority as determined by a customer, revenue potential, and state of technology advancement.

Examiner takes Official Notice that these categories are old and well known.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include in the categories of Kinra the old and well known categories market penetration, priority as determined by a customer, revenue potential, and state of technology advancement since the claimed invention is merely a combination of old elements, and one of ordinary skill in the art would have recognized that it would produce a predictable result of using any categories that are to be evaluated and are important to a particular user (see column 2, lines 18-22, column 7, lines 44-47), including business issues and market penetration, and since the labels of the categories do not functionally affect the computing of scores.

16. In respect to claim 16, Kinra discloses a normalized score calculated by dividing the raw score by the sum of the associated criterion weighting values (*i.e. averaging non-zero partial scores*) (see at least column 4, lines 40-68). However, Kinra does not explicitly disclose averaging the non-zero diagonal elements of  $P$ .

Examiner notes that the diagonal elements of the matrix  $P$  contain the same scores calculated by the invention of Kinra (e.g. the trace of a square matrix).

Wolfram MathWorld discloses that a trace of a square matrix (*i.e. diagonal elements of  $P$* ) is old and well known (see Matrix-Trace from Wolfram MathWorld).

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the technique of calculating the scores and then taking the average of the scores in

Kinra with the old and well known equivalent technique of computing the trace of a square product matrix and then taking the average since claims are combinations that merely unite old elements with no change in their respective functions, and which yield predictable results of arriving at the same results, since neither applicant's specification nor his arguments present any evidence that modifications necessary to effect combinations are uniquely challenging or difficult for person of ordinary skill in art, and since claimed improvement is no more than simple substitution of one known element for another, or mere application of known technique to piece of prior art ready for improvement (*Ex parte Smith*, 83 USPQ2d 1509 (Bd. Pat. App. & Int. 2007)). Further, it has been held that express suggestion to substitute one equivalent technique for another need not be present to render such substitution obvious (*In re Fout*, 213 USPQ 532 (CCPA 1982), *In re Siebentritt*, 152 USPQ 618 (CCPA 1967)).

### ***Conclusion***

17. The prior art made of record and not relied upon considered pertinent to Applicant's disclosure.

- a. Nakano et al. (U.S. Patent Pub. 2002/0184082) discloses a customer satisfaction evaluation method.
- b. Lee (U.S. Patent 5,765,137) discloses correlating product requirements to manufacturing cost.
- c. Zelek et al. (U.S. Patent Pub. 2003/0040954) discloses a method and system for product optimization.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN MILLER whose telephone number is (571)270-5288.

The examiner can normally be reached on Mon - Thur, 9:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BRADLEY BAYAT can be reached on (571) 272-6704. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. M./  
Examiner, Art Unit 3624

/Bradley B Bayat/

Supervisory Patent Examiner, Art Unit 3624